

REMARKS

Upon entry of the present Amendment, claims 1-3 and 5-15 will be all the claims pending in the application. Claims 1-2 and 5-10 have been amended. Claims 3-4 has been canceled without prejudice. New claims 14-15 have been added.

Claim 1 has been amended to incorporate the subject matter of canceled claim 4, to recite a flame-retardant resin composition comprising a polycarbonate type resin and fly ash which contains particles composed of a complex of silicon dioxide and aluminum oxide and has a 50% particle size (D50) of 1 to 10 μm .

Claims 2 and 5-10 have amended to maintain language consistency with the present claim 1.

Claim 9 has been further amended to recite the fly ash contains 44 to 80 weight% of silicon dioxide, 15 to 40 weight% of aluminum oxide and Fe_2O_3 , TiO_2 , MgO and CaO as further components. Support for the amendment to claim 9 can be found in the specification, for example, at paragraph [0054].

New dependent claim 14 recites a flame-retardant molding material according to Claim 10, wherein the flame-retardant resin composition is compounded into a thermoplastic resin other than a polycarbonate resin. Support for the new claim 14 can be found in the specification, for example, at paragraph [0107].

New dependent claim 15 recites use of fly ash which has a 50% particle size (D50) of 1 to 10 μm to impart flame retardancy to a resin composition containing a polycarbonate type resin.

No new matter has been added. Entry of the Amendment is respectfully requested.

As an initial matter, Applicants request the Examiner to acknowledge and accept the Drawings submitted with the application on August 22, 2006.

Further, Applicants request the Examiner to acknowledge Applicants' claim to foreign priority under 35 U.S.C. § 119 and the receipt of certified copies of the priority documents.

I. Rejection of Claim 8 Under 35 U.S.C. § 112

Claim 8 is rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Specifically, the Examiner asserts that the limitation "... the inorganic particles contain particles" is unclear, as to what particles are being referred to in the second instance. Furthermore, the Examiner asserts that there is insufficient antecedent basis for the above claim limitation.

Claim 8 has been amended to recite wherein the fly ash contains particles having particle size of 20 μm or less, in an amount of 70 weight % or more.

Withdrawal of the foregoing rejection of claim 8 under 35 U.S.C. §112 is respectfully requested.

III. Rejection of Claims Under 35 U.S.C. § 103

Claims 1-5, 8-10 and 12-13 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hwang et al. (WO 99/37592; "Hwang") in view of Goodwin (U.S. Patent No. 3,331,671).

Claims 5-7 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hwang et al. (WO 99/37592; "Hwang") in view of Goodwin (U.S. Patent No. 3,331,671), Chang (U.S. Patent No. 5,505,766) and Nomura et al. (JP 2001-220193l; a machine translated English language version is provided by Examiner).

Claim 11 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hwang et al. (WO 99/37592; “Hwang”) in view of Goodwin (U.S. Patent No. 3,331,671), and Nodera et al. (U.S. Patent No. 5,837,757).

Applicants respectfully traverse the above rejections.

Hwang is relied upon by the Examiner as teaching a composition comprising polycarbonate-type resin and fly ash particles having a mean particle size of less than 10 μm .

The Examiner relies on Goodwin to demonstrate that fly ash generally comprises 50% silicon dioxide and 25% aluminum oxide.

Applicants respectfully submit that Hwang, either alone or in view of Goodwin, does not disclose or suggest a flame-retardant resin composition comprising a polycarbonate type resin and fly ash which contains particles composed of a complex of silicon dioxide and aluminum oxide and has a 50% particle size (D50) of 1 to 10 μm , as recited in present claim 1.

In particular, according to the preferred embodiment of the present application, flame retardancy is imparted to a polycarbonate resin composition by the incorporation of fly ash with a D50 particle size of 1 to 10 μm .

The instant specification discloses at paragraph [0015] that fly ash is a characteristic product obtained from the combustion of fuels, in particular coal, in a thermal power plant. A typical composition of fly ash is disclosed in the instant specification at paragraph [0054]. Apart from silicon dioxide and aluminum oxide as main constituents, the fly ash of the present invention contains iron oxide, titanium oxide, and alkaline earth oxides as further components. Paragraph [0054] of instant specification.

In contrast, Hwang discloses the use of fly ash as a filler for plastic products. Hwang relates to resin compositions containing fillers which can be derived from fly ash, but which can

be structurally distinguished from the fly ash itself. In other words, while the term "fly ash" is used in Hwang, Hwang emphasizes that the materials actually incorporated into the resin compositions of the prior art have been processed in order to extract certain components from the original fly ash. Hwang discloses a material as a filler which is referred to as "clean fly ash", and which lacks certain characteristic components of fly ash. Hwang states at page 4, lines 8 to 11, that "the fly ash material is cleaned to remove at least a portion of the carbon content, cenospheres or magnetic particles".

Applicants respectfully submit that the skilled person would have no problems in distinguishing the fly ash of the present invention from the materials extracted from fly ash as taught in Hwang.

Further, Applicants submit that none of the cited references are in any way related to the technical problem underlying the present invention, namely the provision of flame retardant resin compositions.

As disclosed at paragraph [0006] of the instant specification, and as demonstrated in the Examples and Comparative Examples of the instant application, the flame-retardant resin composition of the present invention possess stable superior flame retardancy.

None of the cited references makes up for the above-noted deficiencies of Hwang.

In view of the above, it is respectfully submitted that the present claims are patentable over Hwang in view of Goodwin, or further in view of Chang, Nomura and Nodera, and withdrawal of the foregoing rejections under 35 U.S.C. § 103(a) is respectfully requested.

III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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